ADJUSTABLE DIRECT ACTING PRESSURE REDUCER

Models IR-¾”-PRV, IR-¾”-PRV-05

The BERMAD Adjustable Direct Acting Pressure Reducer is actuated by a pressure responsive diaphragm, which seeks to reach equilibrium between hydraulic and set spring force. It reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand or varying upstream pressure. The low flow version model IR-¾”PRV-05 provide superior solution under conditions of near zero demand.

[1] BERMAD Model ¾”-PRV protects laterals and compensates for line friction, ensuring dripper flow per design.
[2] BERMAD Solenoid Controlled Valve Model IR-21-T
[3] BERMAD Vacuum Breaker Model ½”-ARV
[4] Bermad Combination Air Valve C-10

Features and Benefits

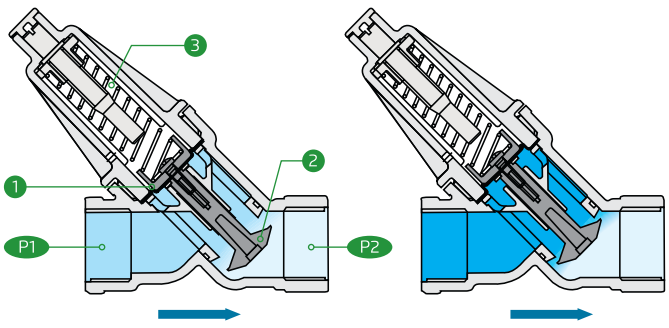
- Advanced Construction Materials
  - High mechanical strength
  - Proven pressure, flow and weather resistance
- Adjustable Direct Acting Pressure Reducer
  - Constant downstream pressure
  - Immediate response
  - Settable according to season and stage
- Plastic Body and Trim
  - Highly durable, chemical and cavitation resistant
  - Minimizes friction
- Unitized Rolling Diaphragm and Guided Plug
  - Accurate and stable regulation
  - Prevents diaphragm distortion
- User-Friendly Design
  - Can be installed at any orientation
  - Simple in-line inspection and service

Typical Applications

- Distribution Line Lateral Risers
- Non-Compensating Drip-Line Flow Fixation
- Lateral Final Burst Protection
- Pressure Reduction for Marginal Plots
- Irrigation Machine Sprinkler Flow Control (¾"-PRV)
- Single Sprinkler Flow Fixation (¾"-PRV)

Operation:

The Upstream Pressure (P1) applies balanced opening and closing hydraulic forces under the Diaphragm (1) and above the Plug (2). The Downstream Pressure (P2) applies hydraulic closing force under the plug, which seeks to reach equilibrium with the Set Spring (3) force. Should (P2) rise above setting, the hydraulic closing forces rise above the mechanical force of the spring, pushing the plug to modulate closed, and reducing (P2) back to setting.



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Technical Data

Size: ¾"; DN20

End Connections: Threaded

Inlet: Female BSP; NPT

Outlet: Female BSP;
NPT or Male BSPT; NPT

Flow Range:
0.2-5 m³/h; 0.9-22 gpm (¾"-PRV)
0.01-3 m³/h; 0.04-13 gpm (¾"-PRV-05)

Pressure Ratings: 10 bar; 145 psi

Operating Pressure Range:
0.7-9 bar; 10-130 psi

Temperature: Water up to 60°C; 140°F

Materials:

Body, Cover and Actuator Assembly:
Glass fiber reinforced Polyamide 6

Diaphragm: NBR (Buna-N), Nylon fabric reinforced

Spring: Stainless Steel

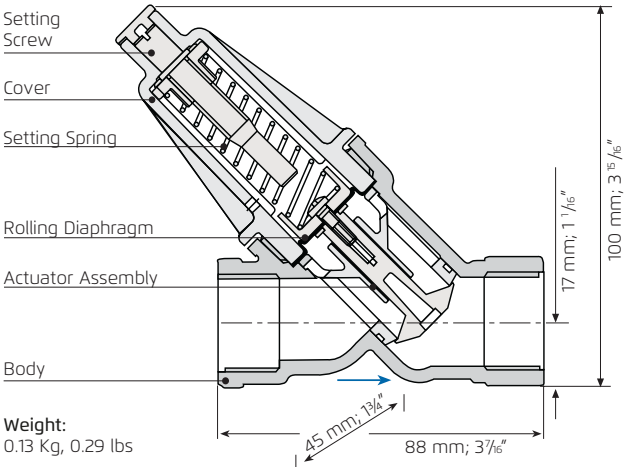
Setting Springs Selection Table:

Spring	Spring color	Setting Range bar; psi
B	White	0.8-2.5; 12-36
C	Red	2.0-4.0; 29-58

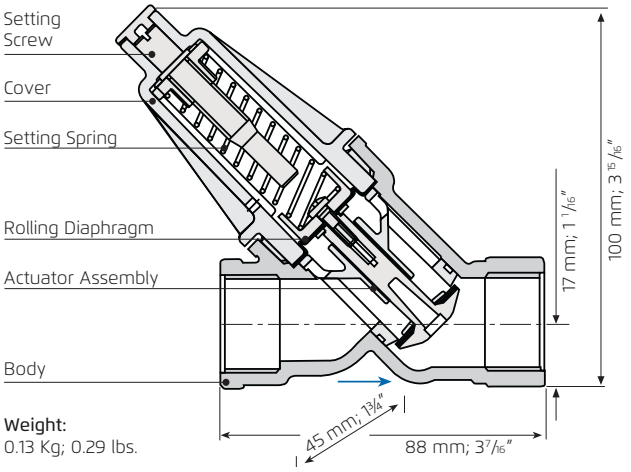
Flow Coefficient:
Kv ¾"-PRV: 4.6
Kv ¾"-PRV-05 (Low Flow): 4.2

Technical Specifications

Valves Dimensions & Weights



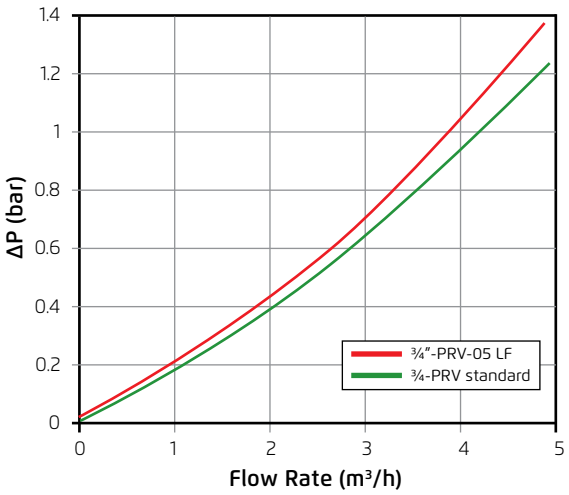
¾" - PRV Cross Section



¾" - PRV-05 Cross Section

Flow Chart

P1 Minimum = P2 Setting + ΔP in Flow Chart



* For flow lower than 0.2m³/h, use LF Model PRV-05

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